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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,055	06/24/2003	Patricia Chapman Irwin	839-1405	1054
30024	7590	10/15/2004	EXAMINER	
NIXON & VANDERHYE P.C./G.E. 1100 N. GLEBE RD. SUITE 800 ARLINGTON, VA 22201			NGUYEN, TRAN N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/604,055	<b>Applicant(s)</b> IRWIN ET AL.	
	<b>Examiner</b> Tran N. Nguyen	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-25 is/are pending in the application.  
     4a) Of the above claim(s) 13-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-3 and 11 is/are rejected.
- 7) ☐ Claim(s) 4-10 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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***Restriction Election***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. **Claims 1-12**, drawn to slot armor component, i.e., coil retainer and slot closure in the rotor core, classified in *class 310, subclass 214*.
- II. **Claims 13-22**, drawn to composite material, classified in *class 428, subclass 172*.
- III. **Claims 23-25**, drawn to a profile co-extrusion system, classified in *class 425 subclass 131.1*

1. **The applicant has elected claims 1-12** without traverse on 8/16/04. Since the applicant did not provide any traversal arguments to the restriction requirement, the response is considered as election without traverse; therefore, the election/restriction is made FINAL.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over either **Crawford et al (US 4922165)** or individually **Hagiwara et al (JP 362171427)** in view of **Vora et al (US 5120825)**.

**Crawford**, or individually alternate ref **Hagiwara**, each discloses a slot armor comprising a plurality of profile co-extruded polymer layers (Crawford's 37 & 39, Hagiwara's 3a1-3a2), except that neither refs discloses the material of the slot armor.

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Vora, however, teaches that polymers may be cast as motor slot armors (also known as slot liners) for insulating the electrical winding from the core and also may serve as heat insulating.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Crawford's or the Hagiwara's slot armors by selecting polymer as fabricating material thereof, as taught by Vora. Doing so would provide the slot armor with highly electrical and heat insulating material to improve the performance thereof.

Regarding claim 11 with the limitations of the first polymer having non-uniform thickness and the second polymer layer having uniform thickness, those skilled in the art would understand that the essential teaching of Crawford or Hagiwara in view of Vora, is the slot armor can be formed as a plurality laminated layers of polymer.

By applying this teaching, it would have been obvious to an artisan at the time the invention was made to modify the size/shape of each polymer in order to ensure fit or enhance performance of the slot armor because it has been held that a change in size or shape, in this instant case it is the change in the size/shape of the polymer layers, is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955) (emphasis added).

3. **Claims 2-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Crawford**, or individually **Hagiwara**, and **Vora**, as applied in the rejection against the base claim, and further in view of **Kaminski (US 5065064)**

The combination of Crawford, or individually Hagiwara, and Vora refs substantially discloses the claimed invention, except for the added limitations of the following: the armor having first leg and second leg that is shorter than the first leg, wherein

the thickness of the legs is uniformed (as in claim 3), or

the thickness of the second leg is thicker than the first leg (as in claim 2).

**Kaminski**, however, teaches a slot armor having the configuration with a first leg (12, 13) that is longer than the second leg (12b, 13b) wherein the second leg is bent at an angle to the first leg. The armor with first leg is located along the slot's length and the second leg provides supporting the end layer of the winding and provides insulating for the end of the slot.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the slot armor with the configuration as taught by Kaminski. Doing so would provide the armor with long portion that located along the slot's length and the second short portion provide supporting the end layer of the winding and provide insulating for the end of the slot.

Regarding the thickness of the second leg to be thicker (as in claim 2), or the armor leg portions having uniform thickness (as in claim 3), by applying the Kaminski's teaching, it would have been obvious to an artisan at the time the invention was made to modify the size/shape of the leg portions of the armor as suitably fitting the slot of a core, since it has been held that a change in size or shape, in this instant case it is the change in the size/shape of the polymer layers, is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955) (emphasis added).

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***Allowable Subject Matter***

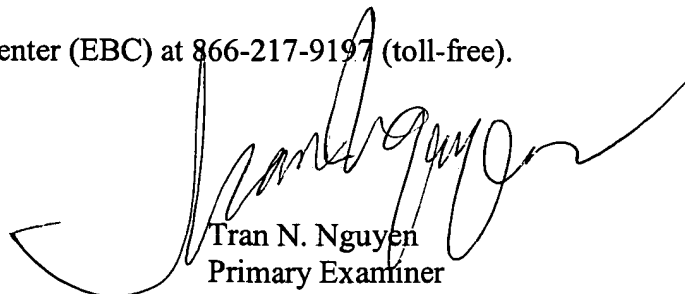
**Claims 4-10, 12** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen  
Primary Examiner  
Art Unit 2834